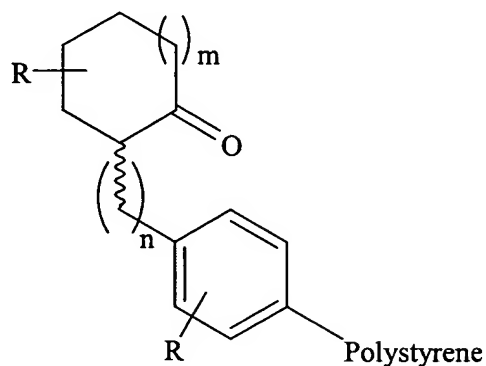


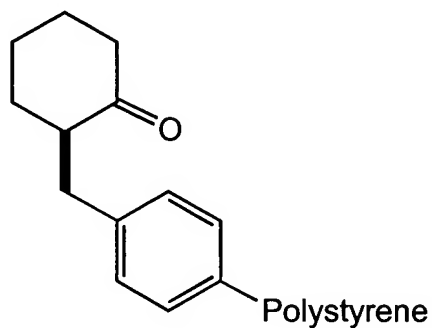
**WHAT IS CLAIMED:**

1. A chiral resin comprising the following formula:

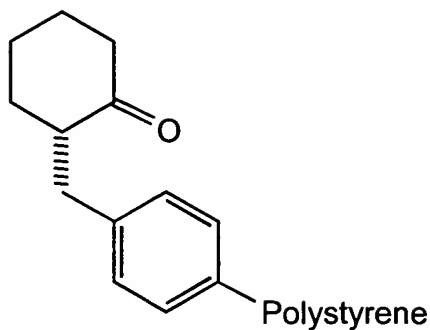


wherein R is selected from the group consisting of H, C1-C6 alkyl and C1-C6 branched alkyl; “n” represents an integer ranging from 1 to 3; and wherein “m” represents an integer ranging from 0 to 3.

2. The chiral resin of claim 1 comprising the formula:

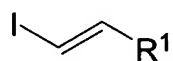


3. The chiral resin of claim 1 comprising the formula:

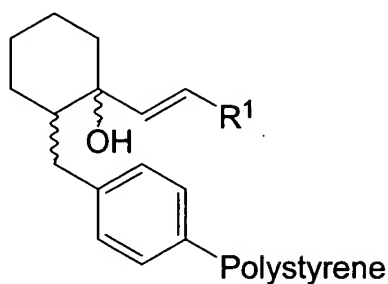


4. A method for the synthesis of chiral compound libraries comprising:

(a) reacting a vinyl iodide of formula:

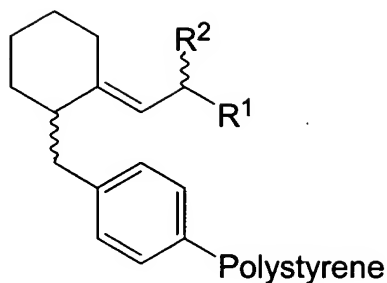


with a chiral resin of claim 1 to provide an allylic alcohol comprising the formula:



wherein R1 is selected from the group consisting of hydrogen, C1-C6 alkyl, C2-C6 alkenyl, C2-C6 alkynyl, C3-C6 cycloalkyl, alkylaryl, and alkyl silyl ether,

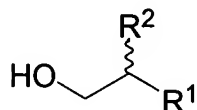
(b) transforming the allylic alcohol into an alkene comprising the formula:



and

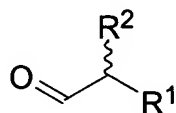
(c) oxidizing the alkene.

5. The method of claim 4, wherein transforming the allylic alcohol into an alkene comprises reacting the allylic alcohol with an organocuprate of formula  $(R^2)_2CuLi$ , wherein  $R^2$  is selected from the group consisting of C1-C6 alkyl, branched C1-C6 alkyl, and phenyl.
6. The method of claim 4, wherein said oxidizing generates a primary alcohol comprising the formula:



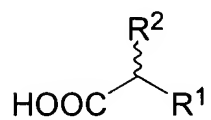
wherein  $R^1$  and  $R^2$  are as previously defined.

7. The method of claim 4, wherein said oxidizing generates an aldehyde comprising the formula:



wherein R1 and R2 are as previously defined.

8. The method of claim 4, wherein said oxidizing generates an acid comprising the formula:



wherein R1 and R2 are as previously defined.